

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Amelia Waite Examiner #: 75063 Date: 6/4/2002
 Art Unit: 1752 Phone Number 305-0407 Serial Number: 191939842
 Mail Box and Bldg/Room Location: C03 A030 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention:

Inventors (please provide full names):

Earliest Priority Filing Date:

*For Sequence Searches Only: Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for a polymer comprising the monomer units as described by the present claim 13 (Annotated). Thank you.

STAFF USE ONLY

Type of Search

Vendor and cost where applicable

Searcher:	NA Sequence (#)	STN	\$189.15
Searcher Phone #:	AA Sequence (#)	Dialog	
Searcher Location:	Structure (#)	Questel/Orbit	
Date Searcher Picked Up:	Bibliographic	Dr. Link	
Date Completed:	Litigation	Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext	Sequence Systems	
Clerical Prep Time:	Patent Family	WWW/Internet	
Online Time:	Other	AK Other (specify)	

=> file reg

FILE 'REGISTRY' ENTERED AT 09:15:54 ON 12 JUN 2002
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STRUCTURE FILE UPDATES: 10 JUN 2002 HIGHEST RN 428438-29-3
DICTIONARY FILE UPDATES: 10 JUN 2002 HIGHEST RN 428438-29-3

TSCA INFORMATION NOW CURRENT THROUGH January 7, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES
for more information. See STNote 27, Searching Properties in the CAS
Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> d his

(FILE 'HOME' ENTERED AT 08:24:04 ON 12 JUN 2002)

FILE 'LREGISTRY' ENTERED AT 08:24:11 ON 12 JUN 2002

L1 STR
L2 STR
L3 STR
L4 STR

FILE 'REGISTRY' ENTERED AT 08:49:24 ON 12 JUN 2002
E C7H9N5

FILE 'ZCPLUS' ENTERED AT 08:56:36 ON 12 JUN 2002

FILE 'CAOLD' ENTERED AT 08:58:08 ON 12 JUN 2002

FILE 'ZCPLUS' ENTERED AT 08:58:25 ON 12 JUN 2002

FILE 'REGISTRY' ENTERED AT 09:02:27 ON 12 JUN 2002

L5 SCR 2043
L6 0 S L1 AND L2 AND L3 AND L4 AND L5
L7 0 S L1 AND L3 AND L4 AND L5
L8 0 S L2 AND L3 AND L4 AND L5
L9 STR L2
L10 0 S L9 AND L3 AND L4 AND L5
L11 3 S L9 AND L3 AND L4 AND L5 FUL
SAV L11 WAL842/A

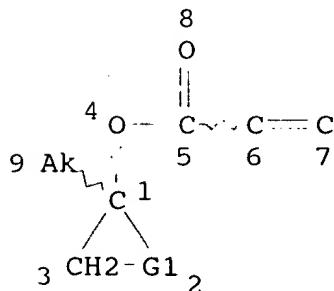
FILE 'ZCPLUS' ENTERED AT 09:14:54 ON 12 JUN 2002

L12 2 S L11

FILE 'CAOLD' ENTERED AT 09:15:13 ON 12 JUN 2002
 L13 O S L11

FILE 'REGISTRY' ENTERED AT 09:15:54 ON 12 JUN 2002

=> d 111 que stat
 L3 STR



REP G1=(2-6) CH2

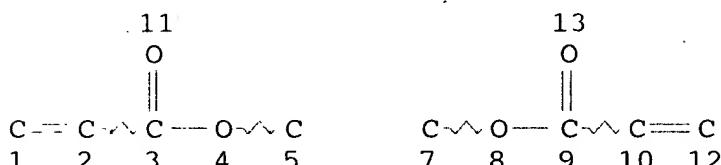
NODE ATTRIBUTES:

CONNECT IS E1 RC AT 9
 DEFAULT MLEVEL IS ATOM
 GGCAT IS SAT AT 9
 DEFAULT ECLEVEL IS LIMITED
 ECOUNT IS M1-X5 C AT 9

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
 L4 STR



NODE ATTRIBUTES:

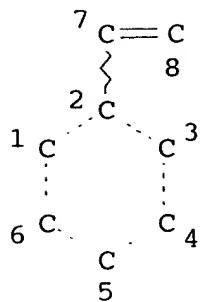
CONNECT IS M2 RC AT 5
 CONNECT IS M2 RC AT 7
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

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 NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
 L5 SCR 2043

L9 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L11 3 SEA FILE=REGISTRY SSS FUL L9 AND L3 AND L4 AND L5

100.0% PROCESSED 2108 ITERATIONS
 SEARCH TIME: 00.00.02

3 ANSWERS

=> file zcaplus
 FILE 'ZCAPLUS' ENTERED AT 09:16:10 ON 12 JUN 2002
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FILE COVERS 1907 - 12 Jun 2002 VOL 136 ISS 24
 FILE LAST UPDATED: 10 Jun 2002 (20020610/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d 112 1-2 ibib abs hitstr hitrn

L12 ANSWER 1 OF 2 ZCPLUS COPYRIGHT 2002 ACS
 ACCESSION NUMBER: 2002:294155 ZCPLUS *Priority Document*
 DOCUMENT NUMBER: 136:316939
 TITLE: Semiconductor device preparation method using chemically-amplified positive working photoresist
 INVENTOR(S): Maemori, Satoshi; Sato, Kazufumi; Nitta, Kazuyuki; Oomori, Katsumi; Tani, Kazuo; Kinoshita, Yohei; Yamada, Tomotaka
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ., 11 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002045133	A1	20020418 P/A	US 2001-939842	20010828
JP 2002148816	A2	20020522	JP 2000-357595	20001124
PRIORITY APPLN. INFO.:			JP 2000-264528 A	20000831
			JP 2000-357595 A	20001124

AB The invention discloses an improvement in the photolithog. patterning process of a photoresist layer in the manuf. of semiconductor devices in which occurrence of defects in the patterned resist layer can be greatly suppressed resulting in increased reliability of the semiconductor devices and process productivity. The improvement can be accomplished by using a chem.-amplification pos.-working photoresist compn. which exhibits a rate of film thickness redn. in the range from 0.09 to 1.0 nm/s when the photoresist layer before light-exposure is kept in a 2.38% aq. soln. of tetramethylammonium hydroxide at 23.degree. C. to dissolve away the resist layer.

IT 412046-04-9
 (semiconductor device prepn. method using chem.-amplified pos. working photoresist)

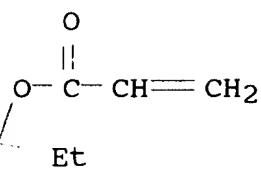
RN 412046-04-9 ZCPLUS

CN 2-Propenoic acid, 1,1,4,4-tetramethyl-1,4-butanediyl ester, polymer with ethenylbenzene, 4-ethenylphenol and 1-ethylcyclohexyl 2-propenoate (9CI) (CA INDEX NAME)

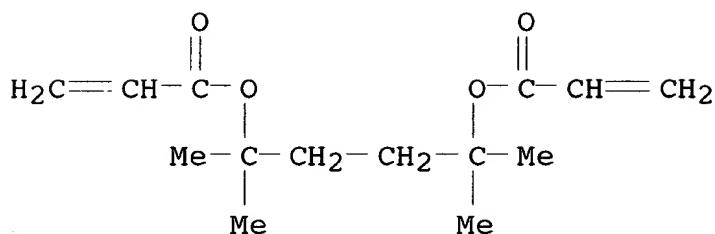
CM 1

CRN 251909-25-8

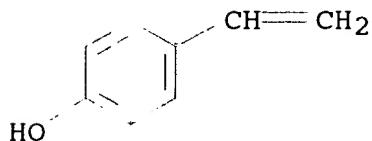
CMF C11 H18 O2



CM 2

CRN 188837-15-2
CMF C14 H22 O4

CM 3

CRN 2628-17-3
CMF C8 H8 O

CM 4

CRN 100-42-5
CMF C8 H8 $\text{H}_2\text{C}=\text{CH}-\text{Ph}$

IT 412046-04-9

(semiconductor device prepn. method using chem.-amplified pos. working photoresist)

L12 ANSWER 2 OF 2 ZCPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:157200 ZCPLUS

DOCUMENT NUMBER: 136:207692

TITLE: Crosslinked positive-working photoresist composition

INVENTOR(S): Oomori, Katsumi; Kinoshita, Yohei; Yamada, Tomotaka; Takayama, Toshikazu

PATENT ASSIGNEE(S): Tokyo Ohka Kogyo Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1182506	A1	20020227	EP 2001-306923	20010814
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002062655	A2	20020228	JP 2000-250174	20000821
JP 2002062656	A2	20020228	JP 2000-250175	20000821
US 2002034704	A1	20020321	US 2001-928399	20010814
PRIORITY APPLN. INFO.:			JP 2000-250174 A	20000821
			JP 2000-250175 A	20000821

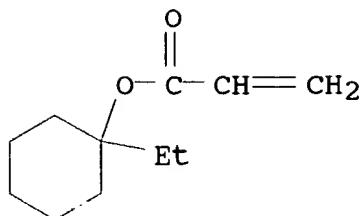
AB A chem.-amplification pos.-working photoresist compn. of the crosslinked type used for photolithog. patterning works in the manuf. of electronic devices comprises a film-forming resinous ingredient capable of being imparted with increased alkali-soly. in the presence of an acid and a radiation-sensitive acid-generating compd., optionally, with further admixt. of an aliph. amine compd. and an acid compd., being characterized by a unique resinous ingredient which consists of four types of monomeric units including hydroxystyrene units, styrene units, monomeric units having acid-dissociable soly.-reducing groups and crosslinking units. The acid-dissociable soly.-reducing group is not a conventional tert-butoxycarbonyloxy group but characteristically a 1-alkylcyclohexyl group or a polycyclic satd. aliph. hydrocarbon group.

IT 400865-44-3, 2,5-Dimethyl-2,5-hexanediol diacrylate-1-ethylcyclohexyl acrylate-hydroxystyrene-styrene copolymer 400865-46-5
(crosslinked pos.-working photoresist compn. contg.)

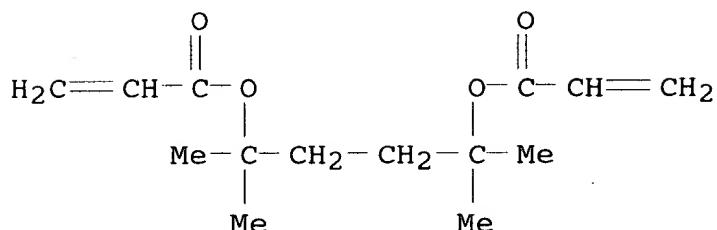
RN 400865-44-3 ZCPLUS

CN 2-Propenoic acid, 1,1,4,4-tetramethyl-1,4-butanediyl ester, polymer with ethenylbenzene, ethenylphenol and 1-ethylcyclohexyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 251909-25-8
CMF C11 H18 O2

CM 2

CRN 188837-15-2
CMF C14 H22 O4

CM 3

CRN 31257-96-2
CMF C8 H8 O
CCI IDS
CDES 8:ID



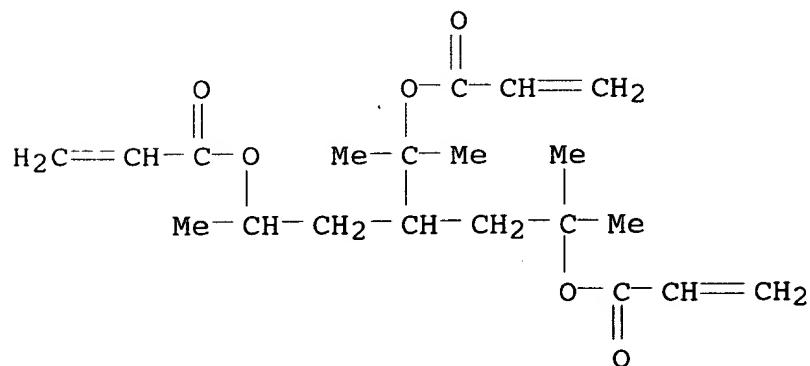
D1— OH

D1— CH= CH₂

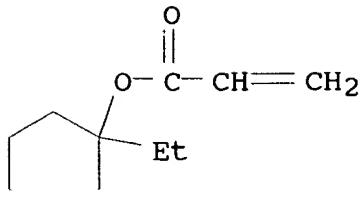
CM 4

CRN 100-42-5
CMF C8 H8H₂C= CH— PhRN 400865-46-5 ZCPLUS
CN 2-Propenoic acid, 1,1,5-trimethyl-3-[1-methyl-1-[(1-oxo-2-propenyl)oxy]ethyl]-1,5-propanediyl ester, polymer with ethenylbenzene, ethenylphenol and 1-ethylcyclohexyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 400865-45-4
CMF C20 H30 O6

CM 2

CRN 251909-25-8
CMF C11 H18 O2

CM 3

CRN 31257-96-2
CMF C8 H8 O
CCI IDS
CDES 8:ID

D1- OH

D1- CH= CH2

CM 4

CRN 100-42-5
CMF C8 H8H₂C= CH- PhIT 400865-44-3, 2,5-Dimethyl-2,5-hexanediol
diacrylate-1-ethylcyclohexyl acrylate-hydroxystyrene-styrene
copolymer 400865-46-5
(crosslinked pos.-working photoresist compn. contg.)

REFERENCE COUNT:

6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR
THIS RECORD. ALL CITATIONS AVAILABLE IN
THE RE FORMAT